[Claims]

1. A method for producing reactive organic compounds containing poly-DOPO, which are obtained by addition of 9,10-dihydro-9-oxa-10-phosphaphenanthrene-10-oxide (DOPO) onto acetylenically unsaturated compounds which carry reactive groups, in the presence of a catalyst which is suitable for the addition of triple bonds.

2. The method as claimed in claim 1, wherein the organophosphorus compound DOPO and the acetylenically unsaturated compound are reacted with one another in the ratio 1.5 to 3 mol of DOPO per triple bond, preferably 1.9 to 2.1 mol of DOPO per triple bond.

3. The method as claimed in claim 1 and 2, wherein the acetylenically unsaturated compounds used are alkynes, alkynols, alkynecarboxylic acids, alkynecarboxylic esters or corresponding alkadiyne compounds.

4. The method as claimed in claim 1 to 3, wherein the catalyst used for the reaction of the organophosphorus compound DOPO with the acetylenically unsaturated compound is mercury salts or copper salts or amines or, preferably, aluminum triisopropoxide.

5. The method as claimed in claim 1 to 4, wherein the addition reaction is carried out in solution, where the solvent used is preferably 1,4-dioxane.

6. The use of the reactive organic compounds containing poly-DOPO prepared as in claims 1 to 5

as flame retardant for thermoplastic polymers.